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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/284,160	10/25/1999	AHARON MEIR EYAL	U012190-3	1964

7590

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EXAMINER

OH, TAYLOR V

ART UNIT

PAPER NUMBER

1625

12

DATE MAILED: 04/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/284,160

Applicant(s)

EYAL ET AL.

Examiner

Taylor Victor Oh

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Final Rejection

The Status of Claims

Claims 19-34 have been rejected.

Claim Rejections-35 USC 103

1. Applicants' argument filed 1/24/2002 have been fully considered but they are not persuasive.

Rejection of claims 19-34 under 35 U.S.C. 103(a) as being unpatentable over Baniel et al (U.S. 5,510,526) in view of Metz et al (U.S. 4,282,385).

The rejection of Claims 19-34 under 35 U.S.C. 103(a) as being unpatentable over Baniel et al (U.S. 5,510,526) in view of Metz et al (U.S. 4,282,385) is maintained for the reasons of the record in paper no. 6.

Response to Argument

2. The applicants argue the following issue:
 1. Metz has nothing to do with an extraction process,
 2. There is no suggestion that the combination of Baniel and Metz would result in a more efficient extraction,
 3. There is no predictable success with the combination of Baniel and Metz ,

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4. There is no hint in Baniel or Metz that the process described in Baniel could be successful in an extraction from an aqueous solution containing free lactic acid in a defined amount,
5. It would not be expected that free lactic acid could be extracted efficiently from the lactate salt –containing broth by an amine-based extractant due to the buffering effect of the salt,
6. The combination of the references would not arrive at the claimed invention due to the absence of teaching in either of them regarding the possibility of using an extractant already containing lactic acid for extracting lactic acid from the mixture of lactic acid and its salt,
7. The results in Examples 1-4 in the specification must be considered as the unexpected outcomes in comparison with the absence of showing such results in Baniel et al or Metz.

The applicants' argument have been noted, but these arguments are not persuasive.

First of all, with regard to Metz's lack in teaching an extraction process and the failure of combined Baniel and Metz references to arrive at a more efficient extraction,

the Examiner has noted the argument. However, the Metz reference has been used as a secondary reference to supplement the primary reference regarding the possibility of forming compounds with more than 3 moles of free lactic acid per mole of calcium lactate by using calcium hydroxide and calcium carbonate in a reaction. Furthermore, Baniel et al does teach a

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process for the recovery of lactic acid by using a tertiary amine in the presence of carbon dioxide by means of extraction. Therefore, if the skillful artisan in the art had desired to make a high free lactic acid content, it would have been obvious for the skillful artisan in the art to have used the Metz's teaching the formation of hyperacid metal lactates in the Baniel et al's lactic acid recovery process.

Secondly, concerning no predictable success with the combination of Baniel and Metz, the Examiner has noted the argument. However, the Baniel et al does emphasize that when the fermentation is carried out in the presence of calcium carbonate, it is possible to recover the lactic acid by acidification with sulfuric acid (see col. 1, lines 55-58) whereas Metz has pointed out the possibility of forming compounds with more than 3 moles of free lactic acid per mole of calcium lactate by using calcium hydroxide and calcium carbonate in a reaction. Therefore, if the skillful artisan in the art had desired to make a high free lactic acid content in the extraction process, it would have been obvious for the skillful artisan in the art to have used the Metz's teaching the formation of hyperacid metal lactates in the Baniel et al's lactic acid recovery process.

Thirdly, with respect to the lack of hint in Baniel or Metz that the process described in Baniel could be successful in an extraction from an aqueous solution containing free lactic acid in a defined amount, the Examiner has noted the argument. However, the Baniel et al does emphasize that when the fermentation is carried out in the presence of calcium carbonate, it is possible to recover the lactic acid by acidification with sulfuric acid (see col. 1, lines 55-58) whereas Metz has pointed out the possibility of forming compounds with more than 3 moles of free lactic acid per mole of calcium lactate by using calcium hydroxide and calcium carbonate in

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a reaction. Therefore, it is possible that the combination of Baniel and Metz's process could be successful in an extraction from an aqueous solution containing free lactic acid in a defined amount by a routine experimentation.

Thus, if the skillful artisan in the art had desired to make a high free lactic acid content in the extraction process, it would have been obvious for the skillful artisan in the art to have used the Metz's teaching the formation of hyperacid metal lactates in the Baniel et al's lactic acid recovery process.

Fourthly, concerning the lack of teaching that free lactic acid could be extracted efficiently from the lactate salt-containing broth by an amine-based extractant due to the buffering effect of the salt, the absence of teaching in either of them regarding the possibility of using an extractant already containing lactic acid for extracting lactic acid from the mixture of lactic acid and its salt, the Examiner has noted the argument. However, the argument is not directly related to the issues in the claims. Therefore, this is irrelevant to the claims.

Fifthly, regarding to the absence of showing such results in Baniel et al or Metz. in comparison with the unexpected results in Examples 1-4 in the specification, the Examiner has noted the argument. However, applicants' argument can not replace the evidence. If applicants had desired to show any unexpected result, the Examiner 'd recommend to file a declaration in which unexpected results are clearly shown from the side-by-side comparison between the example of the primary reference and the current invention.

Therefore, the Examiner maintains the rejection of all the claims

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. Victor Oh whose telephone number is (703) 305-0809. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alan Rotman , can be reached on (703) 308-4698. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

✓
4/24/2

Paul J. Killos
PAUL J. KILLOS
PRIMARY EXAMINER